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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/426,896	10/26/1999	YOSHIYUKI IMANAKA	35.C13949	2496

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EXAMINER

DUDDING, ALFRED E

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 07/22/2002

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/426,896

Applicant(s)

IMANAKA ET AL.

Examiner

Alfred E. Dudding

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,7,9-17,20-26 and 28-30 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 1,11,12,17,20,21,23,24 and 28-30 is/are rejected.

- 7) ☒ Claim(s) 2,3,5,7,9,10,13-16,25, and 26 is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other:

DETAILED ACTION

Priority

1. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Specification

2. The disclosure is objected to because of the following informalities: *page 23, line13, change "1441" to - -441- -. .

Appropriate correction is required.

Drawings

3. The drawings are objected to because Figure 2, reference character '30' should be '305'. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim23, line 12, is objected to because of the following informalities: change "vinary" to - -binary- -. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 11/3/2/1, 12, 17/5/3/2/1, 20/5/3/2/1, 21, 23, 24, 26, 29, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Barbour et al, (U.S. 6,315,828 B1).

Barbour et al. discloses printhead having a substrate, Figure 1B element 16, the printhead detachably mounted on a printer main body, Figure 2, element 234 (carriage), and elements 236 (printhead cartridge), comprising plural external connection terminals individually receiving, from the exterior, a binary logic signal corresponding to whether or not to execute a recording operation, Figure 1, common bus from controller to memory and processing driver head a recording image signal, Figure 17, element and a clock signal, Figure 17, element 1751; recording execution means for executing the recording operation according to the recording image signal and the clock signal entered through said external connection terminals, in case said binary logic signal is in a first state; data memory means for executing a memory access which is at least either of data writing and data readout; and memory access means for recognizing said binary logic signal as an access permission signal and executing the memory access to said data memory means at a timing corresponding to the clock signal when the logic signal is in a second state. Barbour et al. discloses that the printhead uses heat generating elements to eject

ink, Column 2, lines 34 – 39. Barbour et al. discloses that the power for the memory and the driver circuit has a common supply terminal, Figure 1b, output from element 114 (power supply) to element 124 (data processor)

The clock (timing) and data signals to the printhead memory are in common with the bus going to the printhead driver circuit, therefore the controller controls the activation of either the printhead memory or the printhead driver circuitry, Figure 1B, elements 124 and 126, and is able to access either the printhead memory in the common bus, or activate the nozzle drive circuitry using the same bus. It is inherent that the bus contain both data and timing signals, usually in a parallel wiring arrangement.

Allowable Subject Matter

7. Claims 2, 4, 5, 703/2, 9/3/2, 10/3/2, 13/5/3/2, 14/5/3/2, 15/5/3/2, 16/3/2, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

a. A search of prior art did not cite a head substrate wherein said external connection terminals include a first common terminal wiring means for supplying said externally entered binary logic signal to the memory access means and to the recording execution means; and a second common terminal wiring means for supplying the externally entered clock signal as a recording clock signal to the recording execution means and as a memory clock signal to the memory access means as cited in the limitations of claims 2, 13/5/3/2

b. A search of prior art did not cite a head substrate wherein the common terminal wiring means allows at least one of the input of data into the memory access means and the output of

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data from the memory access means, using the same external connection terminal that serially inputs the recording image signal as claimed in the limitations of claims 3, 5.

c. A search of prior art did not cite a head substrate wherein the common terminal wiring means is adapted for supplying said memory means with the reset signal for the shift register as the binary logic signal constituting the access permission signal as claimed in the limitations of claims 7, 10/3/2.

d. A search of prior art did not cite a head substrate wherein the common terminal wiring means is adapted for supplying the memory access means with the input signal to one of the external connection terminals as the mode switching signal as claimed in the limitations of claim 14/5/3/2.

e. A search of prior art did not cite a printing head wherein the external connection terminals include first common terminal wiring means for supplying the externally entered binary logic signal to the memory access means and to the recording execution means; and second common terminal wiring means for supplying the externally entered clock signal as a recording clock signal to said recording execution means and as a memory clock signal to said memory access means as claimed in the limitations of claim 22.

f. A search of prior art did not cite a printing apparatus wherein the input means is adapted for serial transmission of the recording image signal to a specified one of the external connection terminals; and the access control means is adapted for serial transmission of the writing data for the memory access means to one of the external connection terminals in which the recording image signal is serially entered as claimed in the limitations of claim 25.

g. A search of prior art did not cite a printing apparatus wherein: the input means is

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adapted for parallel transmission of the recording image signal to a specified plurality of the external connection terminals; and the access control means is adapted for parallel transmission of the writing data for the memory access means to the plurality of external connection terminals in which the recording image signal is parallel entered as claimed in the limitations of claim 26.

Conclusion

8. The IDS submitted 10 April 2001 is missing from the file jacket. It is requested that the Applicant submit a duplicate IDS for consideration.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alfred Dudding whose telephone number is (703) 308-6082. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow Jr., AU 2853, can be reached at (703) 308-3126. The fax phone numbers for this Group are (703) 305-3432, (703) 305-3431, (703) 308-7382, (703) 308-7724, and (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-0956.

Alfred Dudding

AD

07-16-02

John Barlow Jr.
John Barlow
Supervisory Patent Examiner
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